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AUTHORS: (8) Brodovyy, V. A. and Lyashenko, V. I.

TITLE: (6) Temperature dependence of the kinetics of photoconductivity of single crystals of Sb_2S_3

PERIODICAL: (15) Ukrayins'kyy fizychnyy zhurnal, v. 7, # 10, 1962.

pp. 1062-1066

TEXT: The temperature range was -100° to $+100^{\circ}\text{C}$. The kinetics of photoconductivity were studied by analyzing the decrease of photocurrent after illuminating the samples by single rectangular pulses of white light. There are two groups of specimens with different behavior, which is illustrated by graphs taken from two specimens, the resistance of specimen 1 being about 109 ohm.cm and that of specimen 2 about 108 ohm.cm. Each component of the photocurrent is considered separately. Heating of specimen 1 leads to more intense poly-molecular recombination. At 68°C the decrease of the first component of the photocurrent is exponential, and so is that of the second component at 44°C . Decrease of temperature only di-

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Temperature dependence f ...

minishes the intensity of the first component, which practically disappears at -35°C . In specimen 2 there is no change of recombination mechanism with temperature increase up to 80°C . The stationary photoconductivity of the specimens has a maximum about -10°C and a minimum about 35°C . There are 4 figures.

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